

U.S. Patent Application Serial No. 09/722,114
Attorney Docket No.: 001552

REMARKS

Claims 1 and 2 are pending in the application.

Claims 1 and 2 have been amended in order to more particularly point out, and distinctly claim the subject matter to which the applicant regards as his invention. It is believed that this Amendment is fully responsive to the Office Action dated July 1, 2002.

Objection to the Claims

Claims 1 and 3 have been objected to for minor informalities. Taking the Examiner's comments into consideration, claim 1 has been amended. Further, claim 3 has been canceled. Therefore, withdrawal of the objection to claims 1 and 3 is respectfully requested.

Claim Rejection under 35 USC §112

Claims 1-4 are rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Specifically, the Examiner is objecting to the phrase "the center of the battery case" in claim 1. Taking the Examiner's comments into consideration, claim 1 has been amended. Therefore, withdrawal of the rejection of claims 1-4 under 35 USC § 112, second paragraph, is respectfully requested.

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Claim Rejection under 35 USC §102(e)

Claims 1 and 2 are rejected under 35 USC §102(e) as being anticipated by Omaru et al. (U.S. Patent No. 5,916,707).

Omaru et al. describes a non-aqueous electrolyte battery designed to eliminate thermal expansion as seen in figure 4 B. This is accomplished by providing lands (12 a) in the sidewalls of the battery as illustrated in figure 1. These lands (12 a) are indentations in walls (12) which prevents spreading of walls (12) caused by thermal pressure.

The present invention is a sealed battery designed to prevent thermal expansion of the sidewalls of the battery due to thermal pressure. This is accomplished by providing at least one of the interior walls of the battery case with a curved surface so that the center portion of the wall is thinner than the outer sections of the wall.

Omaru et al. does not describe that at least one of the interior surfaces of a wall forming the battery case is curved so that the center section thereof is thinner than any other section, as illustrated in figures 1 and 3 of the present application.

Specifically, claim 1 patentably distinguishes over the prior art relied upon, by reciting,

"A sealed battery, accommodating a battery element of flat shape, said battery element, comprising: a positive electrode and a negative electrode being laminated onto each other with a separator interposed between them and being wound together; and a battery case containing said positive and negative electrode, comprising: a plurality of walls forming the battery case with each wall of the plurality of walls having an inner surface and a flat outer surface, wherein the inner surface of one wall of the plurality of walls has a curved surface in which a center portion of said one wall of the plurality of walls is thinner than any other portion of said one wall."
(Emphasis Added)

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Claims 2 and 5 are allowable by virtue of their dependence upon an allowable independent claim. Therefore, withdrawal of the rejection of Claims 1 and 2 under 35 USC §102(e) as being anticipated by Omaru et al. (U.S. Patent No. 5,916,707) is respectfully requested.

Added Claim

New claim 5 is added to this application. New claim 5 finds support in the specification and figures. New claim 5 is allowable by virtue of its dependence upon an allowable independent claim. Therefore, allowance of new claim 5 is respectfully requested.

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Conclusion

In view of the aforementioned amendments and accompanying remarks, claims 1 and 2, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

Enclosures: Version with markings to show changes made

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VERSION WITH MARKINGS TO SHOW CHANGES MADE 09/722,114

IN THE CLAIMS:

Please amend claims 1 and 2 as follows:

1. (Amended) A sealed battery, accommodating a battery element of flat shape, said battery element, comprising:

a positive electrode and a negative electrode being laminated [on] onto each other with a separator interposed between them and being wound together; and [, characterized in that a recessed portion is formed on a side surface of]

a battery case [running in parallel to a flat surface of the battery element, said recessed portion having a central axis running in parallel to said flat surface and being positioned on a surface passing through the center of the battery case and running perpendicularly to the surface in parallel to the flat surface of the battery element] containing said positive and negative electrode, comprising:

a plurality of walls forming the battery case with each wall of the plurality of walls having an inner surface and a flat outer surface, wherein the inner surface of one wall of the plurality of walls has a curved surface in which a center portion of said one wall of the plurality of walls is thinner than any other portion of said one wall.

2. (Amended) [A] The sealed battery according to claim [1] 5, wherein said battery is a lithium ion battery.